

=> d hist

(FILE 'HOME' ENTERED AT 10:12:53 ON 10 FEB 2004)

FILE 'STNGUIDE' ENTERED AT 10:13:05 ON 10 FEB 2004

FILE 'REGISTRY' ENTERED AT 10:14:49 ON 10 FEB 2004

E ASMN2/MF
L1 1 S E3
E MN2P/MF
L2 1 S E3

FILE 'CAPLUS' ENTERED AT 10:16:23 ON 10 FEB 2004

L3 43 S L1
L4 1 S L3 AND (LITHIUM OR LI)
L5 48 S L2
L6 0 S L5 AND (LITHIUM OR LI)
L7 0 S L5 AND ELECTRODE#
L8 0 S L5 AND INTERCALAT####
L9 0 S L1 AND ELECTRODE#
L10 0 S L1 AND INTERCALAT####
S 12005-88-8/REG#

FILE 'REGISTRY' ENTERED AT 10:30:27 ON 10 FEB 2004

L11 1 S 12005-88-8/RN

FILE 'CAPLUS' ENTERED AT 10:30:27 ON 10 FEB 2004

L12 88 S L11
L13 0 S L12 AND (ELECTRODE# OR ANODE#)
S 12006-15-4/REG#

FILE 'REGISTRY' ENTERED AT 10:31:59 ON 10 FEB 2004

L14 1 S 12006-15-4/RN

FILE 'CAPLUS' ENTERED AT 10:31:59 ON 10 FEB 2004

L15 456 S L14
L16 5 S L15 AND (ELECTRODE# OR ANODE#)
S 12006-40-5/REG#

FILE 'REGISTRY' ENTERED AT 10:34:58 ON 10 FEB 2004

L17 1 S 12006-40-5/RN

FILE 'CAPLUS' ENTERED AT 10:34:58 ON 10 FEB 2004

L18 267 S L17
L19 0 S L18 AND (ELECTRODE# OR ANODE#)
L20 7 S L18 AND (LITHIUM OR LI)
S 12014-28-7/REG#

FILE 'REGISTRY' ENTERED AT 10:40:20 ON 10 FEB 2004

L21 1 S 12014-28-7/RN

FILE 'CAPLUS' ENTERED AT 10:40:21 ON 10 FEB 2004

L22 210 S L21
L23 0 S L22 AND (ELECTRODE# OR ANODE#)
L24 4 S L22 AND (LITHIUM OR LI)
S 12133-44-7/REG#

FILE 'REGISTRY' ENTERED AT 10:46:34 ON 10 FEB 2004

L25 1 S 12133-44-7/RN

FILE 'CAPLUS' ENTERED AT 10:46:35 ON 10 FEB 2004

L26 283 S L25
L27 2 S L26 AND (ANODE# OR ELECTRODE#)
S 12254-85-2/REG#

FILE 'REGISTRY' ENTERED AT 10:48:07 ON 10 FEB 2004

L28 1 S 12254-85-2/RN

FILE 'CAPLUS' ENTERED AT 10:48:07 ON 10 FEB 2004

L29 32 S L28
L30 0 S L29 AND (ELECTRODE# OR ANODE#)
L31 0 S L29 AND BATTER###
S 12263-33-1/REG#

FILE 'REGISTRY' ENTERED AT 10:49:28 ON 10 FEB 2004

L32 1 S 12263-33-1/RN

FILE 'CAPLUS' ENTERED AT 10:49:29 ON 10 FEB 2004

L33 31 S L32
L34 0 S L33 AND (ELECTRODE# OR ANODE# OR BATTER###)

> d hist

(FILE 'HOME' ENTERED AT 12:14:25 ON 11 FEB 2004)

FILE 'STNGUIDE' ENTERED AT 12:14:32 ON 11 FEB 2004

FILE 'REGISTRY' ENTERED AT 12:14:43 ON 11 FEB 2004

E COP3/MF

L1 1 S E3

FILE 'REGISTRY' ENTERED AT 12:16:23 ON 11 FEB 2004

L2 STR 12187-17-6

L3 0 S L2 EXA SAM

FILE 'CAPLUS' ENTERED AT 12:16:46 ON 11 FEB 2004

L4 20 S L1 AND STRUCTURE

L5 13 S L4 AND CRYSTAL####

L6 0 S L5 AND CU2S

L7 9 S L1 (P) STRUCTURE

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YOU HAVE REQUESTED DATA FROM 9 ANSWERS - CONTINUE? Y/(N):y

L7 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:342861 CAPLUS

DOCUMENT NUMBER: 133:67806

TITLE: Crystal structure and properties of some filled and unfilled skutterudites: GdFe₄P₁₂, SmFe₄P₁₂, NdFe₄As₁₂, Eu_{0.54}Co₄Sb₁₂, Fe_{0.5}Ni_{0.5}P₃, CoP₃, and NiP₃

AUTHOR(S): Jeitschko, Wolfgang; Foecker, Aloys J.; Paschke, Dirk; Dewalsky, Martin V.; Evers, Ch. B. H.; Kunnen, Bernd; Lang, Arne; Kotzyba, Gunter; Rodewald, Ute Ch.; Moller, Manfred H.

CORPORATE SOURCE: Anorganisch-Chemisches Institut der Universitat, Munster, D-48149, Germany

SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (2000), 626(5), 1112-1120
CODEN: ZAACAB; ISSN: 0044-2313

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The new cubic compound Fe_{0.5}Ni_{0.5}P₃ (α 775.29(5)pm) as well as the known compds. CoP₃ and NiP₃ were synthesized from the elemental components using Sn as a flux. Their skutterudite (CoAs₃) type structures were refined from single-crystal x-ray data. The new compound GdFe₄P₁₂ was prepared by reaction of an alloy Gd_{1/3}Fe₂Y₃ with P in a Sn flux. Its cubic filled skutterudite (LaFe₄P₁₂ type) structure was refined from single-crystal x-ray data: a 779.49(4) pm, R = 0.019 for 304 structure factors and 11 variable parameters. SmFe₄P₁₂ shows Van Vleck paramagnetism while GdFe₄P₁₂ is a soft ferromagnet with a Curie temperature of

Tc = 22(5) K. Both are metallic conductors. The new isotypic polyarsenide NdFe₄As₁₂ (a 830.9(1) pm) was obtained by reacting NdAs₂ with Fe and As in the presence of a NaCl/KCl flux. The new isotypic polyantimonide Eu_{0.54}(1)Co₄Sb₁₂ (a 909.41(8) pm) was prepared by reaction of EuSb₂ with Co and Sb. Its structure was refined from single-crystal x-ray data to a residual of 0.024 (137 F values, 12 variables). A comparison of the Fe-P and P-P bond lengths in the compds. AFe₄P₁₂, where the A atoms (A = Ce, Eu, Gd, Th) have differing valencies, suggests that the Fermi level cuts through Fe-P bonding and P-P antibonding bands.

- IT Crystal structure
(of Group VIII pnictides)
- IT Curie temperature (paramagnetic)
Electric resistance
Paramagnetism
(of iron gadolinium/samarium phosphides)
- IT 65035-81-6P, Iron samarium phosphide (Fe₄SmP₁₂) 276693-77-7P, Gadolinium iron phosphide (GdFe₄P₁₂)
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure and elec. conductivity)
- IT 12187-17-6P, Cobalt phosphide (CoP₃) 12192-07-3P, Nickel phosphide (NiP₃) 276693-78-8P, Iron neodymium arsenide (Fe₄NdAs₁₂) 276693-79-9P 276693-80-2P, Iron nickel phosphide (Fe_{0.5}Ni_{0.5}P₃)
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(preparation and crystal structure of)
- IT 7439-89-6, Iron, reactions 7440-00-8, Neodymium, reactions 7440-02-0, Nickel, reactions 7440-19-9, Samarium, reactions 7440-31-5, Tin, reactions 7440-36-0, Antimony, reactions 7440-38-2, Arsenic, reactions 7440-48-4, Cobalt, reactions 7723-14-0, Phosphorus, reactions 12512-02-6, Neodymium arsenide (NdAs₂) 12739-23-0, Iron 67 nickel 33 (atomic) 59984-51-9, Gadolinium 33 iron 67 (atomic) 69459-69-4 276693-81-3
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for preparation of cobalt/iron/nickel pnictides with/without other metals)

REFERENCE COUNT: 65 THERE ARE 65 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:254366 CAPLUS

DOCUMENT NUMBER: 130:359907

TITLE: Electronic structure and thermoelectric prospects of phosphide skutterudites

AUTHOR(S): Fornari, Marco; Singh, David J.

CORPORATE SOURCE: C.S.I. George Mason University, Fairfax, VA, 22030-4444, USA

SOURCE: Physical Review B: Condensed Matter and Materials Physics (1999), 59(15), 9722-9724
CODEN: PRBMD0; ISSN: 0163-1829

PUBLISHER: American Physical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The prospects for high thermoelec. performance in phosphide skutterudites are studied based on 1st-principles calcns. We find that stoichiometric CoP3 differs from the corresponding arsenide and antimonide in that it is metallic. As such, the band structure must be modified if high thermopowers are to be achieved. In analogy to the antimonides, it is expected that this may be done by filling with La. Calcns. for LaFe4P12 show that a gap can in fact be opened by La filling, but that the valence band is too light to yield reasonable p-type thermopowers at appropriate carrier densities; n-type La-filled material may be more favorable.

IT Thermoelectric materials
(electronic structure and thermoelec. prospects of phosphide skutterudites)

IT Band structure
Density of states
Electronic structure
(of thermoelec. phosphide skutterudites)

IT 12187-17-6, Cobalt phosphide (CoP3) 65035-77-0, Iron lanthanum phosphide (Fe4LaP12)
RL: PRP (Properties)
(electronic structure and thermoelec. prospects of phosphide skutterudites)

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1998:172328 CAPLUS

DOCUMENT NUMBER: 128:262137

TITLE: Skutterudite vs. ReO3 structures for MX3 solids:
electronic requirements

AUTHOR(S): Llunell, Miquel; Alvarez, Santiago; Alemany, Pere

CORPORATE SOURCE: Departament de Quimica Fisica and Departament de Quimica Inorganica, Universitat de Barcelona, Barcelona, 08028, Spain

SOURCE: Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1998), (7), 1195-1200
CODEN: JCDTBI; ISSN: 0300-9246

PUBLISHER: Royal Society of Chemistry

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Electronic band-structure calcns. on ReO3 and CoP3 were performed to analyze the different structural preferences found for these two compds. The electronic origin of these differences is associated with the formation of the characteristic nonmetal four-membered rings of the skutterudite structure, which is energetically unfavorable for compds. with small, strongly electroneg. anions. The combination of two factors was identified to be responsible for the structural differences between these compds. The 1st is the electronegativity difference between the two types of atoms that form the solid: for strongly electroneg. nonmetal atoms like O or F the ReO3-type structure is expected to be the most stable, while

for the combination of less electroneg. atoms like the pnictides with late transition metals the skutterudite structure is preferred. The 2nd factor is the relative size of the constituting atoms: small atoms like F and O favor the ReO₃ structure, while larger atoms like P and As stabilize the skutterudite one.

- IT Crystal structure types
(electronic band structure and electronegativity in relation to stability of skutterudite vs. ReO₃ crystal structure type)
- IT Electronegativity
(in relation to stability of skutterudite vs. ReO₃ crystal structure type)
- IT Band structure
(of ReO₃ and CoP₃ in relation to stability of skutterudite vs. ReO₃ crystal structure type)

- IT 1314-28-9. Rhenium oxide (ReO₃) 12187-17-6. Cobalt phosphide (CoP₃)

RL: PRP (Properties)

(electronic band structure and electronegativity in relation to stability of skutterudite vs. ReO₃ crystal structure type)

REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1996:548108 CAPLUS

DOCUMENT NUMBER: 126:51197

TITLE: Electronic band structure and conductivity of MP₃ (M = Co, Ni) skutterudites

AUTHOR(S): Zhukov, V. P.

CORPORATE SOURCE: Institut Khimii Tverdogo Tela, Yekaterinburg, 620219, Russia

SOURCE: Fizika Tverdogo Tela (Sankt-Peterburg) (1996), 38(1), 166-175

CODEN: FTVTAC; ISSN: 0367-3294

PUBLISHER: Nauka

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB The electronic band structure was studied of CoP₃ and NiP₃ skutterudites by the Hueckel method. The dependence of the semiconductor gap on the type of AO hybridization, electron d. and electron configurations of atoms is determined. The conduction electrons in NiP₃ belong predominantly to the phosphorus sublattice.

- IT Band structure
Bond
Density of states
Electric conductivity
Electron configuration
Electron density
(band structure, electron d., and mechanism of conductivity in CoP₃ and NiP₃ skutterudites)

- IT 12187-17-6. Cobalt phosphide (CoP₃) 12192-07-3. Nickel phosphide

(NiP3)

RL: PRP (Properties)

(band structure, electron d.. and mechanism of conductivity in CoP3 and NiP3 skutterudites)

L7 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:186980 CAPLUS

DOCUMENT NUMBER: 122:13647

TITLE: Promising thermoelectric materials for terrestrial-space applications

AUTHOR(S): Caillat, T.; Borshchevsky, A.; Fleurial, J. P.; Vandersande, J. W.

CORPORATE SOURCE: Jet Propulsion Laboratory, California Institute Technology, Pasadena, CA, 91109, USA

SOURCE: Proceedings of the Intersociety Energy Conversion Engineering Conference (1994), 29TH(PT. 1), 575-9
CODEN: PIECDE; ISSN: 0146-955X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB This paper presents a new family of materials with the skutterudite crystal structure which, based on initial results obtained on several compds. of this family, has a good potential for thermoelec. applications. This class of materials covers a wide range of decomposition temps. and bandgaps, which could be used for low, intermediate to high temperature applications. The interesting features of the skutterudite family of materials are discussed.

IT Thermoelectric materials

(thermoelec. materials with skutterudite crystal structure for terrestrial-space applications)

IT 12187-17-6, Cobalt phosphide (CoP3) 12187-20-1, Cobalt antimonide (CoSb3) 12192-07-3, Nickel phosphide (NiP3) 12196-58-6, Iridium phosphide (IrP3) 12196-60-0, Iridium antimonide (IrSb3) 12202-47-0, Palladium phosphide (PdP3) 12202-48-1, Rhodium phosphide (RhP3) 12210-72-9, Rhodium antimonide (RhSb3) 12256-04-1, Cobalt arsenide (CoAs3) 12256-08-5, Iridium arsenide (IrAs3) 12256-11-0, Rhodium arsenide (RhAs3)

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(with skutterudite crystal structure; as thermoelec. material for terrestrial-space applications)

L7 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1978:30582 CAPLUS

DOCUMENT NUMBER: 88:30582

TITLE: The preparation and characterization of the cobalt skutterudites 1:3 cobalt pnictide compounds

AUTHOR(S): Ackermann, J.; Wold, A.

CORPORATE SOURCE: Dep. Chem., Brown Univ., Providence, RI, USA

SOURCE: Journal of Physics and Chemistry of Solids (1977), 38(9), 1013-16

CODEN: JPCSAW; ISSN: 0022-3697

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The crystal structures of CoX_3 ($X = \text{P, As, Sb}$), prepared by chemical vapor transport with Cl_2 as the transport agent, were determined by x-ray diffraction; the space group is IM_3 and $a_0 = 7.702, 8.208, \text{ and } 9.034 \text{ \AA}$, resp. The crystal stoichiometries are $\text{Co}_{1.001}\text{X}_{3.001}$. The magnetic susceptibilities indicate diamagnetic behavior. Hall and Seebeck effects and elec. resistances were also determined. CoP_3 is a semiconductor with an optical band gap of 0.45 eV . CoSb_3 and CoAs_3 have no band gaps and their resistivities increase with temperature. A band diagram for CoAs_3 is proposed, based on a 1-electron scheme for other transition metal chalcogenides and pnictides.

IT Semiconductor materials
(cobalt tripnictides)

IT Crystal structure
Electric resistance
Hall effect
Magnetic susceptibility
Thermoelectricity
(of cobalt pnictides)

IT Energy level, band structure
(of cobalt tripnictides)

IT Magnetic property and Magnetism
(dia-, of cobalt pnictides)

IT Energy level, band structure
(gap, of cobalt phosphide)

IT Crystal structure types
(skutterudite, of cobalt pnictides, elec. and magnetic properties of)

IT 12187-17-6 12187-20-1 12256-04-1

RL: PRP (Properties)

(crystal structure and elec. and magnetic properties of)

L7 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1969:32440 CAPLUS

DOCUMENT NUMBER: 70:32440

TITLE: Structure and bonding in skutterudite-type phosphides

AUTHOR(S): Rundqvist, Stig; Ersson, Nils O.

CORPORATE SOURCE: Univ. Uppsala, Uppsala, Swed.

SOURCE: Arkiv foer Kemi (1968), 30(10), 103-14

CODEN: ARKEAD; ISSN: 0365-6128

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The crystal structures of CoP_3 , RhP_3 , IrP_3 , and NiP_3 were determined by x-ray powder diffraction methods. The metal atoms have a distorted octahedral environment of 6 P atoms, the Co-P, Rh-P, Ir-P, and Ni-P distances being $2.22, 2.34, 2.34, \text{ and } 2.38 \text{ \AA}$, resp. The P atoms form planar, rectangular P_4 groups with P-P distances along the shorter edges of $2.22\text{-}2.24 \text{ \AA}$ and along the longer edges of $2.28\text{-}2.34 \text{ \AA}$. Different schemes for the chemical bonding are reviewed and discussed in relation to the elec. and magnetic

- properties of the compds.
- IT Crystal structure
(of phosphides)
- IT Iridium phosphide (IrP3)
Phosphide
Rhodium phosphide (RhP3)
RL: PRP (Properties)
(crystal structure of)
- IT 12187-17-6 12192-07-3
RL: PRP (Properties)
(crystal structure of)

L7 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1966:31876 CAPLUS

DOCUMENT NUMBER: 64:31876

ORIGINAL REFERENCE NO.: 64:5894b-d

TITLE: Electron-valence diagram for semiconductor compounds
of the skutterudite type

AUTHOR(S): Kuz'min, R. N.

SOURCE: Khim. Svyaz v Poluprov. i Tverd. Telakh, Inst. Fiz.
Tverd. Tela i Poluprov., Akad. Nauk Belorussk. SSR
(1965) 335-46

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB cf. CA 64, 4403g. The structure of compds. AVIIB3V with structures of
the skutterudite type was analyzed. Of the BV elements, As and Sb for AB3
compds. only with Co, Rh, and Ir, whereas P forms compds. of this type
also with Ni and Pd. N and Bi do not form compds. of the skutterudite
type. A model taking into account the presence of the sq. radical [B]4
was suggested. Only in this respect did the suggested model differ from
the scheme suggested by Dudkin (D. and Abrikosov, CA 53, 14706c; D., CA
53, 19582e). In the compound CoSb3, all valence shells of Sb and Co
participate in the formation of hybrid functions d2sp3 and sp3. This
modified scheme agreed with exptl. data.

- IT Electrons
(configuration or d. distribution of, of antimonides, arsenides and
phosphides of Group VIII metals with skutterudite structure)
- IT Crystal structure
(of antimonides, arsenides and phosphides of Group VIII metals with
skutterudite structure)
- IT 12187-17-6, Cobalt phosphide, CoP3 12187-20-1, Cobalt
antimonide, CoSb3 12192-07-3, Nickel phosphide, NiP3 12196-58-6,
Iridium phosphide, IrP3 12196-60-0, Iridium antimonide, IrSb3
12202-47-0, Palladium phosphide, PdP3 12202-48-1, Rhodium phosphide,
RhP3 12210-72-9, Rhodium antimonide, RhSb3 12256-04-1, Cobalt
arsenide, CoAs3 12256-08-5, Iridium arsenide, IrAs3
(crystal structure and electron configuration of)

L7 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1963:401987 CAPLUS

DOCUMENT NUMBER: 59:1987
ORIGINAL REFERENCE NO.: 59:278c-f
TITLE: Crystallochemical characteristics of borides,
nitrides, silicides, and phosphides of transition
metals
AUTHOR(S): Samsonov, G. V.
SOURCE: Poroshkovaya Met., Akad. Nauk Ukr. SSR (1963), 3(No.
2), 65-79
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB The principal factors which determine the character of the crystal lattice and phys. properties of the compds. studied are: (1) relative dimensions of the metal and nonmetal atoms, (2) degree of electronegativity, (3) ionization potential of the nonmetallic atom, (4) electron affinity and degree of filling of incomplete shells of the metal atoms. These factors were compared and correlated and the following classification of the compds. studied was made. Nitrides of Ti, Zr, Hf, and V with stoichiometric composition show metallic properties, while nitrides of Mo and W represent ionic compds. On the other hand, nitrides of Nb, Ta, and Cr combine metallic and ionic bonds, with some predominance of the latter. Borides are characterized by the presence of isolated configurations of B atoms which become more complicated as B content in borides increases. Hexaborides can be divided into 2 groups (according to their thermal conductivity): (a) Y, La, Ca, Sr, and Ba, in which conductivity increases (in the given

order) slowly with increase in atomic radius; (b) Sm, Nd, Ce, Pr, Ta, Th, and Gd, in which thermal conductivity increases sharply (in the given order) with lowered atomic radius. Yb and Eu are the exceptions in this classification. The majority of silicides represent metallic properties except for Mn, Cr, Fe, and Re, which show semiconductor properties. Phosphides show the highest degree of metallicity of bonds and their heats of formation are lower than those of nitrides. However, because of the ability of P atoms to form covalent bonds with each other, the heats of formation of carbides are lower than those of phosphides, while with increased number of P atoms per atom of metal the heat of formation increases.

IT Electrons

(configuration or d. distribution of, in transition metal borides, nitrides, phosphides and silicides)

IT Transition metal borides

Transition metal carbides

Transition metal nitrides

Transition metal phosphides

Transition metal silicides

(crystal structure and phys. properties of)

IT Bonds

(in transition metal borides, nitrides, phosphides and silicides)

IT Crystal structure

(of transition metal borides, nitrides, phosphides and silicides)

IT Heat of formation

(of transition metal borides, nitrides, phosphides and silicides,

- crystal structure and)
- IT Conductivity, thermal and(or) Conduction, thermal
(of transition metal hexaborides, crystal structure and)
- IT Electronegativity
(of transition metals, in crystal structure and phys. properties of
transition metal borides, nitrides, phosphides and silicides)
- IT Semiconductors, electric
(transition metal silicides as)
- IT Calcium boride silicide
Calcium silicide boride
Niobium nitride
Tantalum nitride
Titanium silicide, TiSi
Vanadium nitride
(crystal structure and phys. properties of)
- IT 1310-43-6, Iron phosphide, FeP 11103-55-2, Nickel phosphide, Ni₅P₂
12007-99-7, Calcium boride, CaB₆ 12008-02-5, Cerium boride, CeB₆
12008-05-8, Europium boride, EuB₆ 12008-06-9, Gadolinium boride, GdB₆
12008-21-8, Lanthanum boride, LaB₆ 12008-23-0, Neodymium boride, NdB₆
12008-27-4, Praseodymium boride, PrB₆ 12008-30-9, Samarium boride, SmB₆
12008-31-0, Terbium boride, TbB₆ 12008-32-1, Yttrium boride, YB₆
12008-33-2, Ytterbium boride, YbB₆ 12017-11-7, Cobalt silicide, CoSi
12017-12-8, Cobalt silicide, CoSi₂ 12018-08-5, Chromium silicide, CrSi
12018-09-6, Chromium silicide, CrSi₂ 12018-36-9, Chromium silicide,
Cr₃Si 12022-85-4, Iron phosphide, FeP₂ 12022-95-6, Iron silicide, FeSi
12022-99-0, Iron silicide, FeSi₂ 12023-53-9, Iron phosphide, Fe₃P
12023-54-0, Iron silicide, Fe₃Si 12032-85-8, Manganese silicide, MnSi
12032-86-9, Manganese silicide, MnSi₂ 12033-37-3, Molybdenum silicide,
Mo₃Si 12033-40-8, Molybdenum silicide, Mo₅Si₃ 12033-43-1, Niobium
nitride, Nb₂N 12033-62-4, Tantalum nitride, TaN 12033-63-5, Tantalum
nitride, Ta₂N 12035-47-1, Nickel phosphide, NiP₂ 12035-64-2, Nickel
phosphide, Ni₂P 12037-65-9, Titanium phosphide, TiP 12038-66-3,
Rhenium silicide, ReSi₂ 12039-75-7, Vanadium silicide, VSi 12039-79-1,
Tantalum silicide, TaSi₂ 12039-88-2, Tungsten silicide, WSi₂
12039-90-6, Zirconium silicide, ZrSi₂ 12046-08-1, Barium boride, BaB₆
12046-54-7, Strontium boride, SrB₆ 12052-37-8, Cobalt phosphide, CoP
12053-27-9, Chromium nitride, Cr₂N 12059-22-2, Nickel silicide, Ni₃Si
12067-56-0, Tantalum silicide, Ta₅Si₃ 12134-02-0, Cobalt phosphide, Co₂P
12134-19-9, Chromium silicide, Cr₃Si₂ 12136-78-6, Molybdenum silicide,
MoSi₂ 12163-59-6, Manganese silicide, Mn₃Si 12187-17-6, Cobalt
phosphide, CoP₃ 12192-07-3, Nickel phosphide, NiP₃ 12201-89-7, Nickel
silicide, NiSi₂ 12229-63-9, Thorium boride, ThB₆ 12396-85-9, Nickel
silicide, Ni₃Si₂ 12410-47-8, Cobalt silicide, Co₃Si 12413-09-1,
Tantalum silicide, Ta₄Si 12504-62-0, Tungsten silicide, W₃Si
12705-37-2, Chromium nitride, 24094-93-7, Chromium nitride, CrN
24621-21-4, Niobium nitride, NbN 24646-85-3, Vanadium nitride, VN
25583-20-4, Titanium nitride, TiN 25658-42-8, Zirconium nitride, ZrN
26508-33-8, Iron phosphide, FeP 37245-81-1, Molybdenum nitride
(crystal structure and phys. properties of)

